WHAT IS CLAIMED IS:

1. A hydraulic system comprising a master cylinder with a housing; a piston arranged with axial mobility to slide in the housing; a pressure compartment inside the housing, said pressure compartment being filled with a hydraulic fluid and closed off by the piston; a piston rod connected to the piston; a sealing means arranged between the housing and the piston; a slave cylinder; and a hydraulic fluid conduit between the master cylinder and the slave cylinder; wherein an application of force to the piston rod causes the piston to move in an axial direction and to put the hydraulic fluid under pressure; and wherein the piston comprises a duroplastic polymer material.

2. The hydraulic system of claim 1, wherein the duroplastic polymer material comprises at least one component from the group of materials consisting of melamine, phenolic resin, epoxy resin, unsaturated polyester, silicone resin, urea, and formaldehyde.

3. The hydraulic system of claim 1, wherein the piston additionally comprises at least one material from the group

consisting of polytetrafluoroethylene, molybdenum disulfide, and graphite.

4. The hydraulic system of claim 1, wherein the duroplastic polymer material is reinforced with glass fibers.

5. The hydraulic system of claim 4, wherein the proportion of the glass fibers is substantially in a range between 1% and 50% by weight.

6. The hydraulic system of claim 1, wherein the duroplastic polymer material is reinforced with globular glass beads.

7. The hydraulic system of claim 6, wherein the proportion of the glass beads is substantially in a range between 1% and 50% by weight.

8. The hydraulic system of claim 1, wherein the housing concomprises polytetrafluoroethylene.

9. The hydraulic system of claim 1, wherein the piston comprises a piston surface with a surface finish having an

average roughness substantially in a range between 0.1 μm and about 2 μm.

10. The hydraulic system of claim 1, wherein the piston comprises a piston surface with a surface finish having a maximum-depth roughness substantially in a range between 1 μm and 10 μm.

11. The hydraulic system of claim 1, wherein the piston comprises a piston surface with a surface finish having a bearing ratio substantially in a range between 30% and 80%.

12. The hydraulic system of claim 1, wherein the piston comprises at least one snifting groove.

13. The hydraulic system of claim 12, wherein the piston has a front surface facing the pressure compartment and the at least one snifting groove is arranged on said front surface.

14. The hydraulic system of claim 13, wherein the at least one snifting groove comprises a plurality of snifting grooves distributed over a circumference of said front surface.

15. The hydraulic system of claim 12, wherein the at least one snifting groove has a depth substantially in a range between 0.5 mm and 1.5 mm.

16. The hydraulic system of claim 1, wherein the piston has a bore cavity containing a ball joint that is connected to the piston rod.

17. The hydraulic system of claim 1, comprising a first end-stop plate that is arranged on the piston rod and limits movement in a pull direction of the piston rod.

18. The hydraulic system of claim 1, comprising a second end-stop plate that is arranged on the piston rod and limits movement in a push direction of the piston rod.